



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/673,268

09/30/2003

Ben-Zion Friedman

P-6152-US

2063

49444 7590 08/18/2008
PEARL COHEN ZEDEK LATZER, LLP
1500 BROADWAY, 12TH FLOOR
NEW YORK, NY 10036

EXAMINER

LUONG, ALAN H

ART UNIT

PAPER NUMBER

2623

MAIL DATE

DELIVERY MODE

08/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/673,268	Applicant(s) FRIEDMAN, BEN-ZION	
	Examiner ALAN LUONG	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/13/2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Art unit is changed into 2623

Response to Amendment

This Office Action is responsive to the Amendment filed on 05/13/2008.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6, 11-16, 18-19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,038,433 issued to Vegt.

Regarding to claim1:Drawing of Vegt illustrates a receiver supports **a method comprising:**

A tuner [1] receives digitally modulated DVB signals as **an incoming channel**, memory [7] supply tuning information to microprocessor [6] **which controls initiating a channel locking procedure indicated by a broadband demodulator [5]** (Vegt , col. 2 lines 20-37, lines 45-50 and col. 3 lines 29-36), **applying** frequency range 47-862MHz, the symbol rate is 1-7 MS/s and the modulation type can for example be QPSK, 16, 32, 64, 128 or 256 QAM are the symbol rate is 1-7 MS/s and the modulation

type can for example be QPSK, 16, 32, 64, 128 or 256 QAM as a **predetermined criterion to interim operational data** (Vegt , col. 2 lines 34-37), **said data resulting from an act of said channel locking procedure** (Vegt , col. 2 line 66 to col. 3 line 28) **to lock onto said incoming channel** (Vegt , col. 3 lines 29-42); and the demodulator [5] provides an indication to microprocessor [6] for **determining whether to continue locking onto said incoming channel** is found **based on a result of said applying said predetermined criterion** by trial and error (Vegt, col. 3 lines 29-51).

Regarding to claims 2, 3: Vegt teaches the method of claim 1, wherein said act of said channel locking procedure is to determine a symbol rate and a signal type of an incoming channel (Vegt, col. 2 lines 31-37)

Regarding to claim 4: Vegt teaches the method of claim 1, wherein applying said criterion comprises determining from said interim data whether a symbol rate of a channel matches a symbol rate required by said broadband demodulator [5] (Vegt , col. 3 lines 29-36)

Regarding to claim 6: Vegt teaches the method of claim 1, wherein the determining whether to continue said channel locking procedure includes using one or more selected Quadrature Amplitude Modulation checks (Vegt , col. 2 lines 36-37)(col. 3 lines 29-36)

Regarding to claim 11: Vegt teaches the method of claim 1, further comprising **completing the channel lock procedure** by microprocessor [6] **if the predetermined criterion for continuing the channel lock procedure has been met** demodulator [5]

indicates to processor [6] locking channel is found, the information of locking channel is stored in memory [7] and processor [6] continues scan the next incoming channel
(Vegt, col. 2 lines 36-42).

Regarding to claim 12: Figure of Vegt discloses receiver circuit as **an apparatus** comprising:

a broadband demodulator [5] to perform a channel locking procedure on an incoming channel (as disclosed in claim 1), **said demodulator [5]** having connection with microprocessor [6] associated with memory [7] which is provided output by level detector [9] from RF channel filter [8] when tuner [1] receives incoming digital signal as DVB (Vegt , col. 2 lines 20-50); these parts are **a channel lock sensing mechanism to determine whether to continue locking onto said incoming channel based on a result of applying a predetermined criterion to interim channel locking data, said data resulting from an act of said channel locking procedure** (see rejection of claim 1).

Regarding to claim 13: The apparatus of claim 12 above, Vegt also discloses a controller [6] manages operation of said lock sensing mechanism. (Vegt , col. 2 lines 27-29, 45-50)

Regarding to claim 14: Vegt further discloses the apparatus of claim 12 above comprises a memory (7) to store instructions to enable operation of said lock sense mechanism.(Vegt , col. 2 lines 29-37, 51-54, col. 3 lines 32-36)

Regarding to claim 15: With respect to the cable modem device claim 15, as discussed above since the apparatus disclosed by Vegt anticipated a part of structural element of cable modem and its function required by scope of claim 12 and since this cable modem device in claim 15 merely repeats the same method of claim 12, claim 15 must also be anticipated by Vegt (see claim 12 rejection).

Regarding to claim 16: With respect to the cable modem device claim 15, as discussed above since the apparatus disclosed by Vegt anticipated a part of structural element of cable modem and its function required by scope of claim 4 and since this cable modem device in claim 16 merely repeats the same method of claim 4, claim 16 must also be anticipated by Vegt (see claim 4 rejection).

Regarding to claim18: With respect to the article claim 18, as discussed above since the apparatus disclosed by Vegt anticipated every structural element and its function required by method claim 1 and since this article in claim 18 merely repeats the same method of claim 1, claim 18 must also be anticipated by Vegt (see claim 1 rejection).

Regarding to claim19: With respect to the article claim 18, as discussed above since the apparatus disclosed by Vegt anticipated every structural element and its function required by method claim 4 and since this article in claim 19 merely repeats the same method of claim 4, claim 19 must also be anticipated by Vegt (see claim 4 rejection).

Regarding to claim 21: With respect to the article claim 18, as discussed above since the apparatus disclosed by Vegt anticipated every structural element and its function required by method claim 11 and since this article in claim 21 merely repeats the same method of claim 11, claim 21 must also be anticipated by Vegt (see claim 11 rejection).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 5, 17 and 20** is rejected under 35 U.S.C. 103(a) as being unpatentable over Vegt, in view of US Pub. No.:2002/0083465 published by Van Beek.

Regarding to claim 5: Vegt teaches the method of claim 1, but fails to teach wherein applying said criterion comprises determining from the interim data whether a signal symbol spectrum picture of a channel matches a signal spectrum picture required by said broadband demodulator.

In an analogous art directed toward a similar problem namely improving the results from matching signal symbol spectrum picture of a channel, Fig. 3 of Van Beek illustrates a frequency channel 10 at 400MHz as a center frequency, with lower $\frac{1}{2}$ channel BW 6MHz at 397MHz [20] and upper $\frac{1}{2}$ channel BW at 403MHz [22], those regions are NOT

recommended to lock frequency channel, Beek recommends region [24] **wherein applying said criterion comprises determining from the interim data whether a signal symbol spectrum picture of a channel matches a signal spectrum picture required by said broadband demodulator** (¶0009, page 2, lines 8-59). In light of Beek, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify a predetermined criterion of Vegt with matching signal symbol spectrum picture of a channel as taught by Van Beek; in order to provide a method to locate and acquire a frequency channel fast and stable.

Regarding to claim 17: With respect to the cable modem device claim 15, as discussed above since the apparatus disclosed by Vegt anticipated a part of structural element of cable modem and its function required by scope of claim 5 in view of Van Beek and since this cable modem device in claim 17 merely repeats the same method of claim 5, claim 17 must also be anticipated by Vegt and Van Beek (see claim 5 rejection).

Regarding to claim 20: With respect to the article claim 18, as discussed above since the apparatus disclosed by Vegt anticipated every structural element and its function required by method claim 5 in view of Van Beek and since this article in claim 20 merely repeats the same method of claim 5, claim 20 must also be anticipated by Vegt and Van Beek (see claim 5 rejection).

5. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vegt, in view of US Pub. 2002/0157110 by Amshoff et al.

Regarding to claim 7: Vegt teaches the method of claim 1, but silent to “initiating at least one channel locking procedure retry”.

In an analogous art directed toward a similar problem namely improving the results from one channel locking procedure retry. Fig. 3 of Amshoff indicates initiating at least one channel locking procedure retry at step 207 of Fig. 2 or step 306 (Amshoff, ¶¶0021, ¶¶0042-¶¶0043). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify a predetermined criterion of Vegt with procedure retry as taught by Amshoff, in order to search channel by recognize standard symbol constellation of QAM signal.

Regarding to claim 8: In the method of claim 7 above, Amshoff also teaches counting a number of channel locking procedure retries (Steps 207 to 215 of Fig. 2, ¶¶0021 to ¶¶0022).

Regarding to claim 9: In the method of claim 8 above, Amshoff teaches initiating a retry command (Amshoff, ¶¶0021), Vegt further teaches a method of scan a frequency range for signal channel wherein number of channel locking attempts is less than a pre-selected threshold (Vegt, Abstract lines 1-11, col.3 lines 37-42),

Regarding to claim 10: In the method of claim 8 above, Vegt also teaches a method of scan a frequency range for signal channel wherein number of channel locking attempts is greater than a selected threshold, initiating a channel locking procedure using an alternative frequency. (see Vegt, Abstract lines 12-20, col. 2 line 66 to col. 3 line 12).

6. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub. 2002/0157110 by Amshoff et al., in view of Vegt

Regarding to **claim 22**. Fig. 1 of Amshoff illustrates a cable network communication system, comprising:

a cable modem termination system CMTS (102) operates at headend to broadcast CATV signals to a cable modem (105); (Amshoff, ¶0013, ¶0014).

However, Amshoff is silent to “a demodulator adapted to screen said broadcast signals during a channel locking procedure on an incoming channel by applying a predetermined criterion to interim operational data, said data resulting from an act of said channel locking procedure to lock onto said incoming channel, and determining whether to screen a broadcast signal, based on a result of said applying said predetermined criterion.

In an analogous art directed toward a similar problem namely improving the results from a demodulator adapted to screen said broadcast signals during a channel locking procedure. Vegt discloses “a demodulator adapted to screen said broadcast signals during a channel locking procedure on an incoming channel by applying a predetermined criterion to interim operational data, said data resulting from an act of said channel locking procedure to lock onto said incoming channel, and determining whether to screen a broadcast signal, based on a result of said applying said predetermined criterion.” (see claim 1 discussion).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify a CMTS of Amshoff with receiving apparatus as taught by Vegt, in order to provide an improved search method wherein the search time is considerably reduced.

Regarding to claim 23: In the cable network communication system of claim 22 above, Amshoff discloses the cable modem, and Vegt discloses an apparatus comprises a controller [6] to execute instructions to screen said broadcast signals during said channel locking procedure(**Vegt , col. 2 lines 27-29, 45-50**)

Regarding to claim 24: In the cable network communication system of claim 22 above, Amshoff discloses said cable modem and Vegt discloses an apparatus comprises a memory unit [7] to store instructions to screen said broadcast signals during said channel locking procedure.(**Vegt , col. 2 lines 29-37, 51-54, col. 3 lines 32-36**).

7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub. 2002/0157110 by Amshoff et al. and Vegt, in view of US Pub. 2002/0144286 by Ovadia.

Regarding to claim 25. Amshoff discloses the cable network communication system of claim 22, but Amshoff and Vegt fail to teach a cable modem rejects unwanted broadcast signals before said locking procedure is completed.

In the same CATV field, Ovadia teaches the channel detection agent (214 of Fig. 3) in receiver 206 of cable modem 200 (fig. 2) rejects unwanted broadcast signals before said locking procedure is completed (Fig. 5, step 502, ¶0045).

In light of Ovadia, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify cable modem network of Amshoff and Vegt with the channel detection agent as taught by Ovadia, in order to rapidly detect and acquire data channels in the received broadband signal.

Response to Arguments

Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Art Unit: 2623

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN LUONG whose telephone number is (571)270-5091. The examiner can normally be reached on Mon.-Thurs., 8:00am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. L./

Examiner, Art Unit 2623

Date 08/14/2008

Application/Control Number: 10/673,268
Art Unit: 2623

Page 13

/Scott Beliveau/
Supervisory Patent Examiner, Art Unit 2623